CITY OF BELLEVUE

Water Quality Report 2016

Results from Testing in 2015

This report contains important information about your drinking water.

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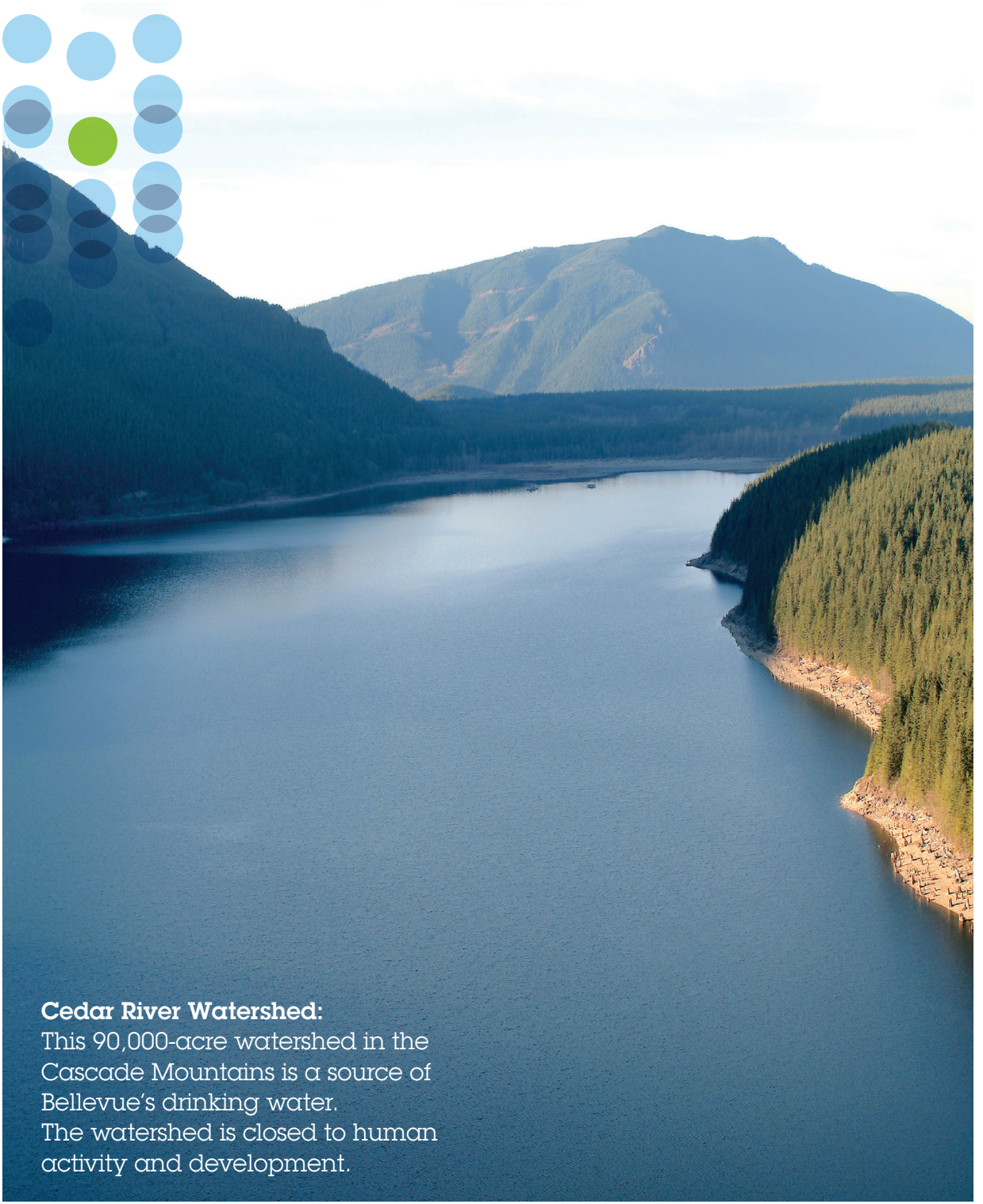


Cedar River Watershed:
This 90,000-acre watershed in the Cascade Mountains is a source of Bellevue's drinking water. The watershed is closed to human activity and development.

The City of Bellevue Utilities presents to you this annual water quality report in compliance with the Safe Drinking Water Act and State Department of Health regulations. In this edition, you will find information about where your drinking water comes from and how it is treated, monitored, and protected, as well as testing results from 2015 and other important information.

BELLEVUE WATER FACTS

STORAGE

25 ACTIVE WATER RESERVOIRS

40 MILLION GALLONS STORAGE CAPACITY
for fire flow and peak usage

62 PRESSURE ZONES

22 PUMP STATIONS

DISTRIBUTION

145,950 RESIDENTIAL POPULATION SERVED

620 MILES OF WATER MAIN PIPE

5,906 FIRE HYDRANTS

41,009 WATER METERS

1,260 coliform bacteria samples taken

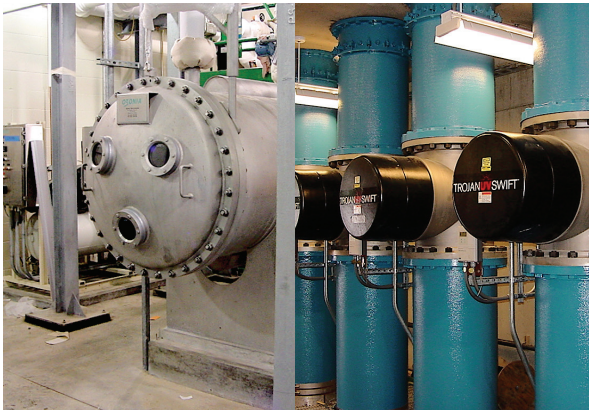
Where Your Water Comes From

The City of Bellevue's water comes from the South Fork Tolt River and the Cedar River. These surface water sources begin in the Cascade Mountains and have very large protected watersheds. Cascade Water Alliance purchases this water for its members from Seattle Public Utilities.

Cascade Water Alliance, now in its 17th year, was formed in 1999 to provide you with water today and tomorrow. In addition to Bellevue, members include Issaquah, Kirkland, Redmond, Tukwila, the Sammamish Plateau, and Skyway Water and Sewer Districts. Each member has a voice in determining its community's future by ensuring the availability of safe and reliable drinking water. As an organization, Cascade also works closely with all water providers in the Central Puget Sound region, ensuring every drop of available water is used efficiently before another drop is developed and that water will be readily available to the region in case of an emergency.

Currently, Cascade gets its water from the Seattle Public Utilities' distribution system. In 2009, Cascade purchased Lake Tapps. The state issued Cascade the official water rights to develop Lake Tapps as a drinking water supply—the newest water supply in the region in decades. As a result of customers like you who use water wisely, responsible plumbing codes, and water efficient appliances, we have enough water for the future and will not need to develop Lake Tapps for years. However, Lake Tapps is there as a vital natural resource for the region.

Planning for water takes decades. That's why Bellevue and Cascade are planning now for the future. When you turn on the tap at home or at work for a drink of clean, safe, and reliable water, it will be there today and tomorrow. For more information, please visit *www.cascadewater.org.*



How Is Your Water Treated?

To protect your health and improve its quality, your drinking water from the Tolt River and Cedar River watersheds is disinfected with ultra-violet light and ozone. Disinfection using ozone is very effective at destroying cryptosporidium and other microbial organisms. Chlorine is added to your water to prevent diseases such as cholera, giardiasis, and salmonellosis and to act as a protective barrier from any recontamination while water is in the distribution system. The average level of chlorine in your drinking water was 1.05 parts per million (ppm) in 2015. Fluoride is added to prevent tooth decay, in accordance with a Seattle public vote in 1968.

The concentration of fluoride was reduced in January, 2011 from 1 part per million to 0.80 ppm, the lowest concentration in the acceptable range defined by the Washington State Department of Health. The average fluoride level in your drinking water was at 0.80 ppm in 2015. In addition, sodium hydroxide is added to the water supply to raise pH levels (a measurement of acidity) to a target of 8.2. pH levels are adjusted to make the water less corrosive to plumbing and reduce the amount of lead and copper that can dissolve into drinking water. After treatment, your water contains very few contaminants, and those present are below the allowable limits.


Cedar River Watershed

Your Water Quality For 2015

Your water is monitored and tested extensively throughout the year. After testing for close to 200 chemical compounds, only a few were detected (see chart below). If you would like to see complete list of chemical compounds that we tested for but did not detect, please call *Water Quality* at *425.452.6192* or visit *www.bellevuewa.gov/drinking-water-quality.htm.*

	EPA's Allowable Limits		Levels in Cedar Water		Levels in Tolt Water		
Detected Compounds	MCLG	MCL	Average	Range	Average	Range	Typical Sources
Raw Water							
Total Organic Carbon, ppm	NA	TT	0.7	0.5 to 1.5	1.5	1.2 to 1.8	Naturally present in the environment
Cryptosporidium*, #/100L	NA	NA	1	ND to 8	ND	ND	Naturally present in the environment
Finished Water							
Turbidity, NTU	NA	TT	0.4	0.1 to 1.2	0.07	0.04 to 1.4**	Soil runoff
Arsenic, ppb	0	10	0.5	0.4 to 0.7	0.6	0.4 to 0.7	Erosion of natural deposits
Barium, ppb	2000	2000	1.6	(one sample)	1.3	(one sample)	Erosion of natural deposits
Bromate, ppb	0	10	ND	ND	0.4	ND – 2	By-product of drinking water disinfection
Chromium, ppb	100	100	0.27	0.25 to 0.33	0.2	ND to 0.24	Erosion of natural deposits
Fluoride, ppm	4	4	0.8	0.7 to 0.9	0.8	0.7 to 0.9	Water additive, which promotes strong teeth
Nitrate, ppm	10	10	0.01	(one sample)	0.10	(one sample)	Erosion of natural deposits
Selenium, ppb	50	50	ND	ND	ND	ND	Erosion of natural deposits
Uranium, ppb	0	30	ND	ND	ND	ND	Erosion of natural deposits
Total Coliform, %	0	5%	ND	ND	ND	ND	Naturally present in the environment
Total Trihalomethanes, ppb	NA	80	Range = 22 to 55; average = 38				By-products of drinking water chlorination
Haloacetic Acids (5), ppb	NA	60	Range = 17 to 57; average = 28				By-products of drinking water chlorination
Chlorine, ppm	MRDLG = 4	MRDL = 4	Range = 0*** to 1.65; average = 1.05				Water additive used to control microbes

*Cryptosporidium was not detected in any samples from the Tolt supply (10 samples). It was detected in 2 of 9 samples from the Cedar supply.

**On December 29, 2015, turbidity for the Tolt supply exceeded 1.0 NTU for about 17 minutes. Turbidity has no health effects, however, it can interfere with disinfection and provide a medium of microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. Customers were notified of this event by mail. No action was necessary and water continues to be safe to drink.

***Whenever chlorine residual is below 0.20 ppm, heterotrophic plate count (HPC) samples were taken to verify detectable chlorine level as defined by EPA. In 2015, all of the City of Bellevue's routine coliform samples met the EPA's definition of detectable chlorine level.

DEFINITIONS

MCLG: *Maximum Contaminant Level Goal* - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety. **MCL:** *Maximum Contaminant Level* - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology. **MRDL:** *Maximum Residual Disinfectant Level* - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants. **MRDLG:** *Maximum Residual Disinfectant Level Goal* - The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants. **TT:** *Treatment Technique* - A required process intended to reduce the level of a contaminant in drinking water. **NTU:** *Nephelometric Turbidity Unit* - Turbidity is a measure of how clear the water looks. The turbidity MCL that applied to the Cedar supply in 2015 is 5 NTU, and for the Tolt it was 0.3 NTU for at least 95% of the samples in a month. 99.96% of the samples from the Tolt in December 2015 were below 0.3 NTU. 100% of the samples for the remainder of the year were below 0.3 NTU. **NA:** *Not Applicable* **ND:** *None Detected* **ppm:** *1 part per million = 1 mg/L = 1 milligram per liter* **ppb:** *1 part per billion = 1 µg/L = 1 microgram per liter*

Lead and Copper Monitoring

In 2014, tap water samples were collected and analyzed for lead and copper from 50 homes throughout Bellevue Utilities service area. These samples are collected every three years as required by the Washington State Department of Health. Our next round of sampling will occur in the summer 2017. Below are the 2014's sample results.

Reducing Lead from Plumbing Fixtures

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Bellevue is responsible for providing high-quality drinking water, but cannot control the variety of materials used in plumbing components in homes and businesses. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the *Safe Drinking Water Hotline* at *1.800.426.4791*, or *www.epa.gov/safewater/lead.*

If you are interested in participating in the lead and copper sampling program, and your single family house was built or remodeled between 1982 and 1986, please contact *Water Quality* at *425.452.6192*.

2014 Lead and Copper Monitoring Results					
Parameter and Units	MCLG	Action Level*	Results**	Homes Exceeding Action Level	Source
Lead, ppb	0	15	4.4	1 of 52	Corrosion of household plumbing systems
Copper, ppm	1.3	1.3	0.16	0 of 52	

* The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
** 90th Percentile: i.e. 90 percent of the samples were less than the values shown.

Protecting Your Water

Cross Connection Control

What is a cross connection?

A cross connection is a permanent or temporary piping arrangement that can allow your drinking water to be contaminated if a backflow condition occurs.

Where are cross connections found?

Whenever a plumbing fixture is connected to the drinking water supply, a potential cross connection exists. Most of the time these cross connections are controlled by the use of a backflow prevention assembly. These assemblies are usually installed by a plumber when the building is constructed and many of them need to be tested and maintained annually.

What is backflow?

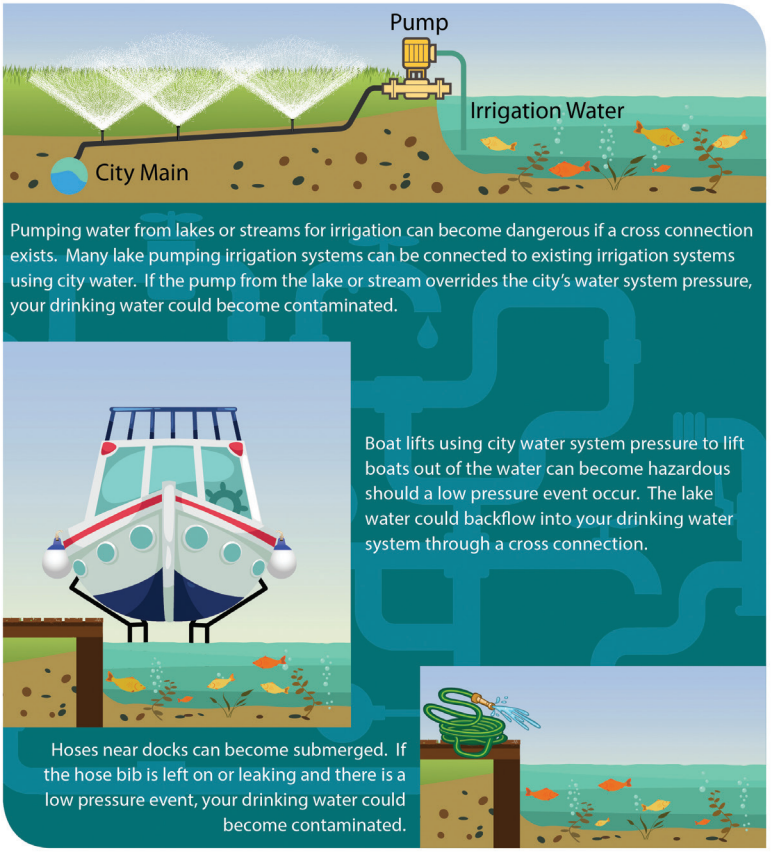
It's just what it sounds like; the water is flowing in the opposite direction from its normal flow. With the direction of flow reversed due to a change in pressure, backflow can allow contaminants to enter your drinking water system through cross connections.

What causes water to flow backwards?

Backsiphonage and backpressure. Backsiphonage is the reversal of normal flow in a system caused by vacuum or partial vacuum within the water supply piping. Backpressure is the reversal of normal flow in a system due to internal plumbing pressure higher than the supply pressure.

To learn more about cross connection control, backflow prevention, or backflow assembly testing, please call *425.452.7840*, or visit *www.bellevuewa.gov/backflow.htm*. For a list of backflow assembly testers approved by Washington State Department of Health, please visit *grcc.greenriver.edu/wacertservices/bat/allcounties_publiclist.asp*.

WATERFRONT PROPERTY CROSS CONNECTION



What We Have Done in 2015

- Cleaned Forest Hill, Factoria, and Somerset #2 reservoirs
- Inspected all reservoirs for any sanitary detects
- Updated City of Bellevue's Water System Plan with Washington State Department of Health
- Installed five additional sample stations to better monitor water quality
- Completed ten miles of water main leak detection
- Flushed 24 miles of water main to improve water quality
- Replaced 3.62 miles of aging water main

What's Planned for The Future

- Building new Horizon View #1 reservoir
- Ramping up the replacement of aging water mains to a sustainable rate of five miles per year
- Installing six additional water quality sample stations
- Updating online water quality monitoring analyzers for chlorine, pH, and temperature
- Continuing to clean five reservoirs per year
- Continuing annual reservoir inspection
- Adding 10 miles of water main leak detection in 2016

Water Use Efficiency Update

Using water efficiently is important to provide a safe, reliable supply of water for our community's needs today and in the future. On behalf of Bellevue and other members, Cascade Water Alliance adopted a six-year regional water use efficiency savings goal of 0.6 million gallons per day on an annual basis and 1.0 million gallons per day during peak season (June to September) by the end of 2019.

In 2015, Bellevue supplied 6.05 billion gallons of water to a population of 145,950, with workers, students, and visitors increasing the daytime population to 225,200. Bellevue's water system is fully metered. The city does its part to encourage the efficient use of water by minimizing water loss caused by leaks throughout its distribution system. Distribution system leakage or water loss was 3.3 percent of total consumption in 2015, well below the Washington State standard of 10 percent.

Cascade Water Alliance provides water efficiency programs and services on behalf of its members, including Bellevue. In 2015 Cascade administered 15 distinct activities including showerhead and aerator installation at commercial accounts, residential gardening classes, irrigation system upgrade rebates, classroom presentations on water topics, free online ordering of shower timers, rain gauges, and other conservation items through Cascade's website, water audits at King County Housing Authority properties, free conservation items shipped to multifamily properties, training for landscape contractors, parks, and school district staff, students, and others on the fundamentals of efficient irrigation management, and implementation of a WaterSense Labeled New Homes program for builders. These programs and services resulted in approximately 20,000 direct customer interactions in 2015 promoting water efficiency and a savings of an estimated 79,205 gallons of water per day across the Cascade member area, or 13% of Cascade's 2014-19 water use efficiency savings goal of 0.6 million gallons per day.

To learn more water efficiency programs and what you can do to save water, visit *Cascade Water Alliance* at *www.cascadewater.org/conservation.php*.

What the EPA Wants You To Know

Sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals, in some cases, radioactive material; and substances resulting from the presence of animals or from human activity. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's *Safe Drinking Water Hotline* at *1.800.426.4791*.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. Environmental Protection Agency/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the *Safe Drinking Water Hotline* at *1.800.426.4791*.

I am concerned about lead in my drinking water.
Lead is found almost everywhere: in food, paint, dust, soils, air, and drinking water. Lead is rarely in drinking water when it leaves the treatment plant. Instead, it leaches into the water from plumbing in buildings and homes and especially from older structures that still have lead pipes. Children and pregnant women are most susceptible to health risks from lead in drinking water. For further inquiries, please contact *City of Bellevue Utilities* at *425.452.7840*.

Is there anything else I can do to reduce the potential for possible lead exposure?
Yes. Here are a few tips:

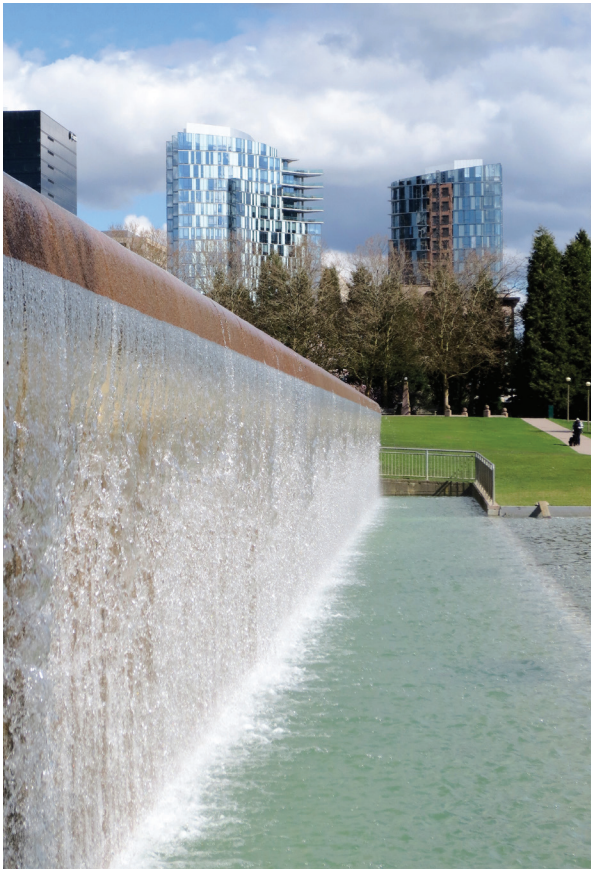
- If water has been standing in pipes for over 2 hours, flush out the pipes by running the tap until you feel a temperature change before using for drinking or cooking, usually thirty seconds to two minutes. To save water, use the water you flush out for watering plants or doing dishes.
- Always draw drinking and cooking water from COLD water tap – lead dissolves more quickly in hot water.
- Never make baby formula or other drinks or food for children from the HOT water tap. Start with water taken from the cold water faucet (after flushing) and warm it if necessary.
- If you are making plumbing changes, be sure to select low-lead or no-lead fixtures.

Who should I contact if my water has a funny smell, taste, or appearance?
A change in your water's taste, color, or smell is not necessarily a health concern. However, sometimes changes can be a sign of problems. If you notice a change in your water, please call *City of Bellevue Utilities* at *425.452.7840*.

Is Bellevue's drinking water hard or soft?
Bellevue's drinking water is soft, and you probably don't need to use special water softeners for your clothes or dishwashing machines.

Frequently Asked Questions

Water's "hardness" and "softness" is due to its concentration of minerals—calcium and magnesium. The lower the mineral concentration, the softer the water is. Bellevue's drinking water has a hardness of approximately 27 mg/L, or 1.58 grains per gallon.



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Important Contact Information

City of Bellevue Utilities
Operation and Maintenance
2901 115th Ave NE, Bellevue, WA 98004
Monday thru Friday: 7:00 am – 3:30 pm
Email: OMSupport@bellevuewa.gov
Website: *www.bellevuewa.gov/utilities.htm*

Utilities employees are on-call to respond to emergencies 24 hours a day. For **drinking water quality, cross connections and backflow assembly testing, water main break, flooding, sewer overflow,** or **pollutant spill**. Please call *425.452.7840*.

During non-working hours, emergency calls are answered by staff who will contact the appropriate stand-by personnel.

Get involved! The Environmental Services Commission is a citizen group that advises The Bellevue City Council on Utilities issues. Call *Bellevue Utilities* at *425.452.4497* for meeting dates and other information.

City Hall
450 110th Ave NE, Bellevue, WA 98009-9012
Service First (general information) *425.452.6800*
www.bellevuewa.gov

Utility Billing *425.452.6973*
To pay your utility bill online, please visit
myutilitybill.bellevuewa.gov

Permit Processing *425.452.4898*
www.mybuildingpermit.com/default.aspx

EPA Hotlines
Safe Drinking Water *1.800.426.4791*
water.epa.gov

Washington State Department of Health
Office of Drinking Water *253.395.6750*
www.doh.wa.gov/CommunityandEnvironment/DrinkingWater

City of Bellevue WASHINGTON

MyBellevue app available at:
Google Play · App Store · Windows Phone · BlackBerry World

This report contains important information about your drinking water. To read it in other languages, visit *www.bellevuewa.gov/drinking-water-quality.htm*

Các báo cáo này chứa các thông tin quan trọng về nước uống của quý vị.
Để đọc bằng các thứ tiếng khác, truy cập **www.bellevuewa.gov/drinking-water-quality.htm**

Данный отчет содержит важные сведения о питьевой воде в вашем регионе.
На других языках он доступен по адресу: **www.bellevuewa.gov/drinking-water-quality.htm**

Este informe contiene información importante acerca del agua potable.
Para leerla en otros idiomas, visite **www.bellevuewa.gov/drinking-water-quality.htm**

本報告內含關於您飲用水的重要資訊。若需要使用其他語言閱讀此資訊，
請參觀網站**www.bellevuewa.gov/drinking-water-quality.htm**

이 보고서에는 식수에 관한 중요한 정보가 들어 있습니다. 다른 언어로 읽으시려면,
다음 웹페이지를 방문하십시오: **www.bellevuewa.gov/drinking-water-quality.htm**

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